

Massachusetts Urban & Community Forestry Program

The Citizen Forester

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Arborists and Stinging Insects in the Landscape: A Potentially Painful Encounter

By Rick W. Harper and
Jody Gangloff-Kaufmann

As arborists and urban foresters we are well familiar with Integrated Pest Management (IPM) as a sustainable, inclusive approach to managing pests that require intervention strategies. It is important to keep in mind that the benefits from the stinging insect community are numerous and include pollination (30% of food crops and 90% of wild plants require the pollination services of bees (1)) and predation. On occasion, however, stinging insects may necessitate an intervention – especially if they are frequenting high-use areas like our community parks, urban trees and landscapes. When we put into context that conflicts with stinging insects accounted for **more than “79 fatalities per year” in the U.S., and comprised “28.2% of the total animal-related fatalities from 1999 to 2007 (2),” it becomes evident that a sting may indeed be a serious occurrence.**

The intended outcome of using IPM is the reduction of risk. These risks include negative economic, environmental and human health side effects such as ineffective pest management, costly damage from pests, unintentional pesticide poisonings, and health risks from pests. Exposure to stinging insects present risks from insecticide exposures, risks related to stings (i.e. envenomation or anaphylaxis), and risk of injury from a fall. Arborists and urban foresters should be keenly aware of stinging insects, understand personal-protective strategies, and take steps to make the landscape a safer working and living environment.

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Inspection
Stinging insect colonies may be difficult to find in the outdoors in the



Honeybee swarm
(Timothy Haley, USDA
Forest Service, Bugwood.org)

early part of the season and much easier to spot in late summer when populations peak. To quickly detect a stinging insect nest, scout the perimeter of a structure by slowly walking along and observing insect activity. Look at the roof-line and eaves of the structure with the sky as a backdrop; scout the

foundation of buildings and base of trees for activity. Pay particular attention to dense brush, compost piles, boards on the ground, railroad ties that may be used as landscaping borders and wooden post-and-rail fences. Yellowjackets (*Vespula* spp.; *Dolichovespula* spp.) and bumble bees (*Bombus* spp.) tend to nest closer to the ground, while honey bees (*Apis mellifera mellifera*), paper wasps (*Polistes* spp.) and baldfaced hornets (*Dolichovespula maculata*) prefer to nest in higher locations. Yellowjacket and honey bee activity will appear like traffic, with many foragers coming and going along an invisible highway. Bumble bee and paper wasp nests have less traffic, but foragers will purposefully return to a single spot. It should also be noted that honey bees are the only social (colony-building) stinging insects in the Northeast that survive the winter as a colony, complete with foragers that emerge in the early spring in large numbers. All other social wasp and bees overwinter as single mated queens in areas with temperate winters.

Binoculars are an important tool, useful in scouting for wasp and bee activity before initiating an ascent. It is especially important to inspect tree holes and crotches for

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yellowjacket or honey bee activity. Bald-faced hornets and aerial yellowjackets (*Dolichovespula arenaria*) construct paper carton nests that hang from trees, structures, and shrubs. Search the tree canopy and on the upper sides of structures for the gray paper nests. Use a rake or other long-handled tool to hit and shake dense shrubs from a distance to check for activity. Also note that certain flowering shrubs and trees may host bee and wasp populations foraging for nectar. For example, black locust (*Robinia pseudoacacia*), Scholar-tree (*Styphnolobium japonicum*), Linden (*Tilia* spp.) and many Hollies (*Ilex* spp.) are attractive to stinging insects when they are in bloom.

Personal Precautions

In late summer, paper wasp, yellowjacket and bald-faced hornet populations and activity peak as the colonies produce new queens that will overwinter. There is a strong demand for carbohydrates (i.e. sugars) by the colony, resulting in the greatest numbers of workers more aggressively foraging for diminishing resources. This puts wasp foragers in frequent contact with people working in the landscape, especially when sweet foods are available. It is not uncommon, for example, to observe donuts and other sweets being made available at late summer events like fairs, workshops and community festivals. Yellowjackets may regularly be observed discovering and foraging on these sweet treats – the precursor to a potentially painful oral encounter! When a tree crew breaks for lunch, they should never leave food or soda cans unattended. Yellowjackets tend to crawl inside soda cans leading to very painful, possibly life threatening stings in the mouth or on the lips. Another minor concern for urban foresters and landscapers is sweat bees (Family: Halictidae), which are small (1/4 inch), dark or sometimes brightly colored bees. They are attracted to perspiration on human skin and females (like all stinging insects) can sting. The sting is minor, but somewhat painful or itchy. Stings most commonly happen when a bee lands on perspiring skin (behind the knees, for example) and become squeezed against the body. The sting may become more serious for sensitive individuals.

Unfortunately, an unsuspecting arborist or urban forester will sometimes discover a hidden nest while on the job, resulting in full-scale colony alarm. This is a danger-

ous situation, especially when climbing or working on a ladder, as the immediate reaction for most people is to suddenly take one or many steps backwards! On the ground, this may be fine, however when working on a ladder or in a climbing saddle you must be prepared for **sudden hazards like a chance encounter with a wasp's nest**. If a thorough inspection using binoculars has not turned up any evidence of wasps in your aerial destination, they may still lurk. If the thought of encountering wasps on a ladder makes you nervous, invest in a bee veil for face and neck protection. They can be purchased for \$15-20 at any online beekeeping supply company, and worn over or under a safety helmet. You might also consider carrying an aerosol can of wasp spray for personal protection, just in case. Those with known allergies to wasp and bee stings should take special precautions and avoid encounters with stinging insect colonies. Multiple **stings can overwhelm a person's immune system even** when epinephrine is applied. In severely allergic patients, death may occur in as little as one hour.

PHYSICAL CONTROLS FOR STINGING INSECTS

If you are faced with mitigating stinging insect problems **on a client's property, determine the type of wasp or bee present** and consider whether non-pesticidal management tools will work.

Sanitation

Bees typically feed on flower nectar and pollen and do not present a problem around food or garbage. Although they may be present in the landscape, individual bees are not aggressive. Wasps, especially yellowjackets and paper wasps, are scavengers and will forage on ripe and fallen tree fruits, at food service areas and in garbage containers. Sanitation involves removing these food sources to reduce wasp foraging in areas where people work or spend time. Collect and remove fallen fruits, preferably early in the morning. Cover garbage containers and be sure trash and recycling bins are rinsed. Garbage, especially food waste, should be bagged in good quality sealable bags to prevent spills

and limit access of wasps to food. Of course, inspect and protect any food and drinks you consume in the field to avoid being stung.

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Sweat bee (Scott Bauer USDA ARS, bugwood.org)

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Traps

Wasp traps, which are available at hardware stores, can reduce the number of foraging wasps. These are useful when activity is high and the nest cannot be found or is located on adjacent property. Hang these traps approximately 2m above – ground and away from human activity. Refresh traps no less than weekly by dumping the contents, rinsing and refilling with soda or fruit juice. An empty soda bottle can also be transformed into a cheap DIY wasp trap that is used in the same manner as the store-bought version (see quick “how to” at: <http://www.wikihow.com/Make-a-Wasp-Trap>). Cheap fruit punch and orange soda are very attractive baits. Place these traps away from human activity, preferably on top of a shed or hanging at about 5-6 feet. Traps are not available, nor necessary, for bees.

Nest removal and exclusion

Paper wasps construct visible hanging umbrella nests on buildings, fences, under decks and in dense shrubs. Nests should be knocked down early in the season using a pole tool or water from a high pressure nozzle on a garden hose. It may be necessary to remove visible paper wasp nests every two weeks from June through July, though they often do not rebuild in the same location.

The most problematic German (*Vespula germanica*) and Eastern yellowjackets (*V. maculifrons*) often take up residence in old rodent, woodchuck or rabbit burrows and underground cavities beneath stumps, in log or compost piles, and around fence posts. There are usually two or more entrances to the colony. The first instinct of someone encountering an underground colony of yellowjackets might be to fill the nest entrance with sand or soil. This is not a good strategy for several reasons. If the entrance is blocked during daylight hours, returning foragers will quickly amass and behave aggressively. They will use alternate entrances if the main one is blocked, and when all are blocked, they will dig their way out within a day or so. If an underground nest is in an area of high human activity and must be treated, an insecticidal dust should be applied to the entrance (preferably after dusk) and the area cordoned off until activity subsides.

Yellowjacket nests in the walls of structures cannot easily be removed, but it is possible to reduce their activity by vacuuming. Once the entrance is located a shop or canister vacuum hose end can be held or fastened near the



Baldfaced hornet nest (Rita Parkins, Bugwood.org)

entrance on an A-frame ladder. Allow the vacuum to run until traffic is reduced to an occasional wasp. For a large colony of thousands of workers, this may take an hour. Seal the hose end of the vacuum and let it sit for a day in the sun, or seal the vacuum in a heavy-duty black plastic bag for 1-2 days. Vacuuming also works for baldfaced hornet and aerial yellowjacket nests on structures or within reach in the landscape. The whole nest carton can be removed along with workers, and contained inside the vacuum.

Chemical control

Chemical pesticides, whether conventional or least-toxic, must be used with caution when dealing with bees and wasps. Though an arborist may have equipment on-hand (i.e. a plant health care truck) that may be well-suited to carrying sufficient amounts of water and insecticide that may be mixed and sprayed long distances to treat even the largest of stinging insect colonies, protective gear should always be worn when performing such a treatment in the landscape. Pyrethrins and pyrethroids are irritating to wasps and can cause aggressive swarming. Plant oil-based insecticides are repellant and can cause a colony to become agitated as well. Use appropriately labeled products only when an imminent threat is present. If you are in fact faced with mitigating stinging insect problems on a property that you serve, be sure that you are in compliance with state and local regulations and that you have the proper pesticide applicator licensing.

Honey bees are valuable and should only be eliminated

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when their colonies pose a threat to humans. Honey bee **swarms may appear threatening, after all, who wouldn't** be fearful of a ball of thousands of live bees in a shrub? Swarms generally move on within a day or two, however, once they have located a permanent home. Call a beekeeper to harvest a swarm that is within reach. The beekeeper will be thankful!

Awareness and the public

For urban foresters who work in public spaces, such as parks, the strategies discussed can help reduce risks to park workers and the public. Stinging insects are inevitable in picnic and playground areas; therefore, sanitation is probably the best risk reduction strategy available. Raise public awareness of their role in sanitation by posting signs reminding park goers to clean up food and drink containers. Keep trash bins clean and empty them as often as possible. Park offices should offer information on how to treat a victim with stings.

Awareness and the professional

As arborists and urban foresters, we know that the first step to working safely is being aware and taking note of a **location's many facets: its features, its liabilities. Our** management of stinging insects should be approached in a similar manner. A committed professional should take the time to routinely scout a location – be it a private residence, a city park or a planting of street trees. If upon a routine inspection a nest of stinging insects is encountered, in all likelihood, it may be addressed proactively, before a chance encounter by an unsuspecting passer-by. And a proactive management that takes place before the situation escalates, is one of the underpinnings of a well-honed IPM program.

Gabriela Chavarria, "Pollinator Conservation," *Renewable Resources Journal*, Winter 1999-2000

Forrester, J.A., C.P. Holstege, J. D. Forrester. 2012. Fatalities from venomous and nonvenomous animals in the United States (1999 –2007). *Wilderness & Environmental Medicine*, 23:146–152.

Jody Gangloff-Kaufmann, Ph.D., is an Urban Entomologist/IPM Specialist with the NYS Integrated Pest Management Program at Cornell University. She is the author of *Wasp and bee management: a common-sense approach*, published (2011) by the Natural Resource, Agriculture, and Engineering Service (NRAES), Cornell University, Ithaca, NY. (ISBN 978-1-933395-22-7)

Richard W. Harper, BCMA, is the Extension Assistant Professor of Urban & Community Forestry at the University of Massachusetts Amherst.

Congratulations Rick Harper!

At the International Society of Arboriculture Annual Conference in August, the ISA awarded Rick Harper with the Award of Achievement. The Award of Achievement is given



“in recognition of sustained outstanding efforts or contribution to the advancement of ISA.” Watch a short video here: https://youtu.be/BX-x0B_o0EU

Growing Greener—in Springfield

Last month, the National Fish and Wildlife Foundation awarded ReGreen Springfield a Five Star and Urban Waters Restoration Grant. ReGreen Springfield applied for the grant with several local partners including the Springfield Science Museum, the US Forest Service, Northern Research Station, local schools including high schools in Springfield and UMass Amherst and Mount Holyoke College, and others. Watch a video on the upcoming grant-funded restoration of Abbey Brook: <https://vimeo.com/135400664>



Species Spotlight—Common peach, *Prunus persica*

By Mollie Freilicher
MA-DCR
Community Action Forester

Hopefully by now, you've already experienced one of late summer's best offerings: locally



Leaves (NC State University)

-grown Massachusetts peaches. Unlike some of our other fall fruits in New England—apples, pears, and grapes—common peach is not native to North America. Common peach is native to China, where it was domesticated by 1000 BCE, with evidence

indicating cultivation 7000 years ago. The wild ancestor of our common peach is likely extinct. Common peach is hardy in zones 5 to 8b. Common peach is a small tree, reaching heights of 20-25 feet, with an equal or greater spread. At maturity, it has a rounded crown, with spreading branches.

Leaves are alternate, simple, elliptical or lanceolate. They are three to six inches long, and acuminate. The edges are serrate or minutely serrate and the leaf surface is dark green, turning yellow in the fall. The twig color may vary from the upper part to the lower, with the upper being reddish in color and the lower being greenish in color.

In April, before leafing out, common peach flowers bloom. The flowers are pink, one-and-a-half-inches wide, and single or in pairs. As we know, they develop into



Fruit (NC State University)

large tasty drupe, three inches in diameter, with yellow or orangey flesh that ripens in August in our area.

Common peach can be difficult to grow—late frosts can injure flowers, too much or too little water can cause issues, and it is susceptible to many insects and diseases.

Common peach requires much dedication on the part of the manager, from pruning, to cultural practices, to monitoring and treating insect and disease problems. As urban orchards grow in popularity, common peach and other fruit trees will come to be more often planted in the urban landscape.

More information on common peach: Peaches: An Excellent Fruit for Southern New England: <https://ag.umass.edu/sites/ag.umass.edu/files/fact-sheets/pdf/peaches.pdf>

HortAnswers, University of Illinois Extension, <http://extension.illinois.edu/hortanswers/plantdetail.cfm?PlantID=30&PlantTypeID=11>.

Prunus persica. University of Florida Extension, <https://edis.ifas.ufl.edu/st513>.

Flowering peach tree (Memory of Mauve), Vincent van Gogh



Flowers (NC State University)



Bark (Virginia Tech)



Landscape Pests and Problems Walkabout, UMass Dartmouth

Thursday, September 10, 2015, 4:00 p.m. to 6:00 p.m., ag.umass.edu/landscape

Join Randy Prostack, Extension Weed Specialist, Nick Brazee, Extension Plant Pathologist, Rick Harper, Extension Assistant Professor in Urban & Community Forestry, and Geoffrey Njue, Extension Sustainable Landscapes Specialist for a walk through the landscape as they discuss and demonstrate how to put IPM practices to work efficiently and examine some of the most common pest and cultural problems of woody ornamentals.

Two pesticide contact hours for categories 29, 36, 40 and Applicators License. Other: 2 ISA, 2 SAF, 1 MCLP, 1 MCH, 1 AOLCP, 0.5 MCA. Preregistration required as space is limited; the cost is \$50 (\$45 for three or more registrations from the same company.) For more info and to register, go to ag.umass.edu/landscape.

THE CITIZEN FORESTER

Growing on Trees

Conference: Natural Disturbance and Forest Management on Municipal Forestland

A conference for Municipal Officials, Foresters, Natural Resource Professionals, Land Trusts, and Civic Groups

Sunday, September 27, 2015, Wilbraham, MA

Engaging speakers will present local, state, and regional perspectives on town forests. A field tour of the Town of Wilbraham's forestlands will highlight methods and results of sustainable management activities and showcase the significant impacts of recent natural disturbances. Afternoon demonstrations will be offered by local wood and natural resource-based businesses, conservation organizations, and recreational groups.

For more information and to register for this free event, go to: <http://masswoodlandsinstitute.org/events.html>

Co-hosted by the Town of Wilbraham, Wilbraham & Monson Academy, and the MA DCR Service Forestry Program, with assistance from the MA Forest Stewardship Program, and the Franklin Land Trust.

Baystate Roads Workshop: Creating Revenue Stream for Stormwater Management

Municipalities subject to the EPA stormwater permit (MS4) are responsible for managing stormwater so it does not pollute nearby rivers, streams, and coastal waters. Experts will cover the following topics:

- ◆ Why stormwater management matters
- ◆ MS4 NPDES (stormwater) permit update and time-line
- ◆ Stormwater financing
- ◆ Case studies
- ◆ Working with your community

October 15 • Holiday Inn & Suites Marlborough, 265 Lakeside Ave., Marlborough, MA

October 20 • Hadley Farms Meetinghouse, 41 Russell Street, Hadley, MA

October 22 • Holiday Inn Taunton, 700 Myles Standish Blvd., Taunton, MA

Find out more at www.Baystateroads.org

Conference: Know the Soil, Know the Land

Thursday, September 17, 2015, 9:00 a.m. – 4:00 p.m.
Heifer Farm, Rutland, Massachusetts

Understanding soils is critical to conservation and land use planning that supports sustainable agriculture, forestry, and greener urban, suburban, and rural communities. This one-day conference will focus on soil information resources available through the USDA Soil Survey. **We'll provide updates on recent changes to the data** and help you understand how to use it. The day will include classroom workshops and field demonstrations.

This training has been approved for up to seven training contact hours (TCH) for Soil Evaluator (SE) renewal under the Massachusetts Title 5 program.

For more information, go to: <http://worchesterconservation.org/massachusetts-soils-conference-47.html>

Sponsored by: the USDA Natural Resources Conservation Service, Massachusetts Association of Conservation Districts and the Worcester County Conservation District.

Dinner Meeting: Western Mass. Tree Wardens and Tree Companies

October 6, 2015, 5:00 – 7:30 p.m., Northampton, MA
Come to the second meeting of the Western Mass. Tree Wardens, a sub-group of the Massachusetts Tree Wardens' and Foresters' Association. **Meet and network with tree wardens, tree companies, and utility arborists from western Mass. Speaker: Dennis Ryan: "Public Shade Trees and Tree Warden Liabilities, What are you on the hook for?"**

For more info: 781-894-4759 or info@masstreewardens.org
www.masstreewardens.org (Upcoming Events)

Women's Tree Climbing Workshop

October 9-11, 2015

Location: Harvard Forest, Petersham, MA
Level I & II

This year's Women's Tree Climbing Workshop is designed for women who have never climbed trees with ropes and harnesses and also for women with prior experience who want to improve their technique. Come learn how to improve and excel in the world of tree climbing. You will leave this workshop with a new skill, wonderful memories, new friends, and a sense of personal accomplishment. Find out more at: <http://www.newenglandisa.org/WTCW.html>.

Growing on Trees

Webcasts

Urban Forestry Today

Fall Noonhour Webcast Series:

The Emerald Ash Borer

Native Ash Seed Collecting:

A Response to Emerald Ash Borer

Thursday, September 3, 2015, 12:00 – 1:00 p.m. (ET)

What action can arborists, urban foresters, and tree enthusiasts take in response to emerald ash borer? Join Molly Marquand, of the Mid-Atlantic Regional Seed Bank, to learn more about native ash seed collecting as a means of preserving and protecting our ash tree resource.

Go to: www.joinwebinar.com Code: 136-194-563

Emerald Ash Borer Update

Thursday, October 1, 2015, 12:00 – 1:00 p.m. (ET)

With the 2015 growing season coming to a close, arborists, urban foresters, and tree enthusiasts will be eager to learn more about the latest activities of the emerald ash borer that occurred in the spring and summer months. Join Dr. Nate Siegert, of the USDA Forest Service, as he provides the latest information on the ecology, natural history, and management of this well-known pest.

Go to: www.joinwebinar.com Code: 101-432-635

Tree Protection During Construction:

What You Don't Know Can Hurt You

Thursday, November 5, 2015 12:00 – 1:00 p.m. (ET)

Urban tree injury related to construction can degrade the performance of our urban trees, limiting their lifespan and even causing tree failure! Arborists, urban foresters, and tree enthusiasts will learn about the latest research, and review proper practices, related to protecting trees during construction as they join guest speaker, Dr. Gary Johnson, University of Minnesota.

Go to: www.joinwebinar.com Code: 138-507-475

These broadcasts are free and each one will offer the opportunity for arborists to earn 1.0 ISA CEU and 0.5 MCA credit.

For more information, contact:

Rick Harper, Dept. of Environmental Conservation
Univ. of Mass., Amherst, rharp@eco.umass.edu

The Urban Forestry Today 2015 Webcast Series is sponsored by the University of Massachusetts Department of Environmental Conservation, in cooperation with the USDA Forest Service, Massachusetts Department of Conservation and Recreation, University of Massachusetts Extension, and Massachusetts Tree Wardens' & Foresters' Association.

department of Conservation and Recreation

Urban Forest Connections

Second Wednesdays | 1:00 – 2:00 p.m. ET

The Forest Service's Urban Forest Connections webinar series brings experts together to discuss the latest science, practice, and policy on urban forestry and the environment. These webinars are open to all. Past webinar presentations and recordings are available online: <http://www.fs.fed.us/research/urban-webinars/>.

September 9, 2015 | 1:00-2:15 p.m. ET

Urban FIA: Bringing the Nation's Forest Census to Urban Areas

Mark Majewsky, USDA Forest Service

Dick Rideout / Andrew Stoltman, Wisconsin Department of Natural Resources

Chris Edgar, Texas A&M Forest Service

Future Webinars

October 14, 2015 | 1:00 p.m.-2:15 p.m. ET

October 28, 2015 | 1:00 p.m.-2:00 p.m. ET

Archived Webcast

on Tree Inventories from Azavea

Learn about free and open source software to analyze your tree inventory data. You can find a YouTube video of the entire webinar [here](#), as well as a SlideShare [here](#).

Find step by step instructions for analyzing tree inventory data in QGIS and PostGIS on the [Azavea Atlas blog](#).

These tools are open source and free to use.

You can also find a blog post covering some in-depth analysis of Edmonton, Canada's tree inventory data on the [OpenTreeMap blog](#).

Community Forest Program:

Webcast on 2016 Grant Round

The Community Forest Program provides financial assistance to local governments, Tribal governments, and qualified nonprofit entities to establish community forests that provide continuing and accessible community benefits. Federal funds are available to pay for up to 50% of the full fee acquisition of forested land for community benefits. In preparation for the 2016 request for applications, the USDA will host an information webinar on September 11. RSVP by September 8. To RSVP for the webinar or to request for more information, contact Neal Bungard at 603-868-7719 or nbungard@fs.fed.us.

Growing on Trees

Tree Steward Training

October 2-3, Harvard Forest, Petersham, MA

The 2015 DCR Tree Steward Training will take place Friday, October 2, to Saturday, October 3, at the Harvard Forest in Petersham. At this

year's session: learn about tree planting, i-Tree, pests, pruning, tree ID, and funding urban forestry programs and participate in a roundtable discussion on urban and community forestry. We'll have a mix of indoor and outdoor sessions. Registration will be available on the DCR Urban and Community Forestry website (<http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/branching-out-additional-programs.html>)

Deadline to register: September 16.

For more information, contact
Mollie Freilicher 413-577-2966

Tree Board Resources

Are you a member of a tree board or committee? Are you thinking about serving on a tree board?

Tree Board University: <http://www.treeboardu.org/> offers a free online training to teach volunteer board members about trees and serving their communities in an advisory role. Tree Board University consists of 8 free, self-paced training courses that include videos, multimedia presentations, and links to other online resources to help teach about the human relations side of urban forestry. Sign up at www.treeboardu.org.

Archived Tree Board Webinar:

"Seven Habits of Highly Effective Tree Boards."

Watch a great 45-minute webinar by Paul Ries on how to be an effective tree board. Learn tips to take with you in other board service

<https://www.youtube.com/watch?v=nrXNLAufnRo>.

Courses from the New England Wildflower Society

There are lots of upcoming courses to help you along in your knowledge of woody plants and other botanical interests. Find out more at: <http://www.newfs.org/learn/our-programs/>.

Native New England Shrubs—September 2015

Native Woody Plant Materials—September 2015

Native Plants in Urban Design—September 27, 2015

Sustainable Site Design Basics—October 1, 2015

Plant Form and Function—October - November 2015

Measuring Soil Health and Managing Site Challenges in an Urban Landscape—October 3, 2015

Courses from the Arnold Arboretum

<http://my.arboretum.harvard.edu/Info.aspx?EventID=1>

Chainsaw Use and Safety—September 12, 2015

Introduction to Botany—September - November 2015

Lecture at Tower Hill Botanic Garden: Bringing Nature Home with Doug Tallamy

Tallamy will discuss the important ecological roles of plants in landscapes and emphasize their ecological, educational, physical, and emotional benefits. Tallamy won the Silver Medal from the Garden Writer's Association for his book, *Bringing Nature Home*. His most recent book, with Rick Darke, is *The Living Landscape: Designing for Beauty and Biodiversity in the Home Garden*.

Member \$15, Non-member \$25

Wednesday, November 4, 7:00 p.m.-8:30 p.m.

For more information go to:

<https://dnbweb1.blackbaud.com/OPXREPHIL/EventDetail.asp?cguid=C7E2C131-AD0F-49AA-B073-5B92F8300A37&eid=52218&sid=F83CE6E1-553B-426D-B485-4818235A4B6C>

We do our best to ensure that listings are accurate, but please check with program organizers for the most up-to-date information.

Growing on Trees

i-Tree. Do you?

i-Tree is a state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban forestry analysis and benefits assessment tools. The i-Tree Tools help communities of all sizes to strengthen their urban forest management and advocacy efforts by quantifying the structure of community trees and the environmental services that trees provide.

Since the initial release of the i-Tree Tools in August 2006, numerous communities, non-profit organizations, consultants, volunteers, and students have used i-Tree to report on individual trees, parcels, neighborhoods, cities, and even entire states. By understanding the local, tangible ecosystem services that trees provide, i-Tree users can link urban forest management activities with environmental quality and community livability. Whether your interest is a single tree or an entire forest, i-Tree provides baseline data that you can use to demonstrate value and set priorities for more effective decision-making.



i-Tree Tools are in the public domain and are freely accessible. We invite you to explore this site to learn more about how i-Tree can make a difference in your community. Find out more and download the current version 6.0.9 at www.itreetools.org.

Need some help with i-Tree?

Check out the new video learning section <http://www.itreetools.org/resources/videos.php>, where you can watch a tutorial on a multitude of i-Tree topics, from how to download the software, to how to set up plots for Eco, or how to use a mobile device to collect data in Eco or Streets.

Lookup.Life App

Put a natural history encyclopedia in your pocket with the free (and ad-free) Lookup Life app.

The next time you say "I wonder what that plant is?" you might not have to go too far to find out, because a new app from the makers of ZipcodeZoo will give you the tools to help identify thousands of plants and animals, using your location and the appearance of the species in question.

Lookup.Life™ provides a powerful search tool "front end" for field identification of species, using your location and clues about what you've seen. Once you've tentatively identified a plant or animal, you'll have access to photos, videos, audio recordings, and interactive maps. Download for Android [here](#). Download for Windows Phone [here](#). Download for iPhone, iPad, and iPod Touch [here](#).

Plants Are Cool Too

Plants are Cool Too is a video series sponsored by the Botanical Society of America and hosted by Dr. Chris Martine. The series, currently seven episodes, cover various botanical topics, from pitcher plants, to fossilized forests, to urban weeds, and nature in New York City. Read more about the series at <http://naturedocumentaries.org/1793/plants-cool-too/> or follow the YouTube Channel at https://www.youtube.com/channel/UC2jD-ZllgTfrk7DxzRQji_w.

New England Chapter, ISA 49th Annual Conference

October 24-27, 2015, North Conway, NH

The 49th Annual Conference is packed with workshops and lectures to bring you the latest in research and techniques in arboriculture and urban forestry. This year, come early for workshops on First Aid, CPR, and AED, aerial rescue, pruning, chainsaw safety and maintenance, and mushrooms and molds. You can come early and take the ISA Certified Arborist, Utility Specialist, Municipal Specialist, or Certified Tree Worker Written Exam. The conference program begins Monday morning and continues through Tuesday afternoon, with a variety of speakers and topics.

For more information, go to: http://newenglandisa.org/annual_conference.html.

Grants

DCR Urban and Community Forestry Challenge Grants

Next deadline: October 1 (Intent to Apply) November 1 (Full Application)

Challenge grants are 50-50 matching grants (75-25 for environmental justice projects) to municipalities and nonprofit groups in Massachusetts communities of all sizes for the purpose of building local capacity for excellent urban and community forestry at the local and regional level.

The USDA Forest Service provides funding for the grant program, and DCR administers the grants with guidance **from the Massachusetts Tree Wardens' and Foresters' Association**. The DCR Urban and Community Forestry Program assists communities and nonprofit groups in their efforts to protect and manage community trees and forest ecosystems, with the ultimate aim of improving the environment and enhancing the livability of all of **Massachusetts's communities**.

For more information on the Challenge Grants, including our Eversource Go Green grants and National Grid Partnership Grants, contact Julie Coop at 617-626-1468 or julie.coop@state.ma.us or Mollie Freilicher at 413-577-2966 or mollie.freilicher@state.ma.us.

Changes to the DCR Urban and Community Forestry Challenge Grant

In 2016, our Urban and Community Forestry Challenge Grant will move to one grant round per year. The annual deadline will be November 1. This move will enable the program to better review and compare grant proposals. Look for some additional changes to the 2016 program in upcoming issues.

Sustainable Forestry Initiative Grant Program

The Sustainable Forestry Initiative's Conservation and Community Partnerships Grant Program provides grants for projects that support partnerships between organizations interested in improving forest management in the U.S. and Canada and responsible procurement globally. Find out more information at: the [Sustainable Forestry Initiative](#). Application Deadline: October 2, 2015. Find out more information at: the SFI [website](#).

Forest Legacy Request for Proposal Now Available for FY2017

The MA Forest Legacy Program FY 2017 Request for Proposals announcement and application materials are posted at: <http://www.mass.gov/eea/agencies/dcr/conservation/forestry-and-fire-control/forest-legacy-program.html>

Forest Legacy Project Proposals must be submitted into the "Forest Legacy Information System" (FLIS) and a hard copy of the application received no later than 5:00 p.m. on September 14, 2015 for project proposals to be considered complete and eligible for review and ranking by the Massachusetts Forest Legacy Committee.

Project proponents should work with the DCR / Bureau of Forestry / Forest Legacy Program Coordinator or the appropriate Forest Legacy Area Sponsor to complete the data entry into FLIS.

Project Proponents are requested to attend the September 2015 meeting of the MA Forest Legacy Committee and be prepared to present their proposal to and answer questions from the Forest Legacy Committee. Additional information about the September 2015 meeting and presentation will be e-mailed to each Project Proponent.

For additional information please contact:
Lindsay Nystrom, MA Forest Legacy Program
MA-DCR, 355 West Boylston Street, Clinton, MA 01510
phone: 978-368-0126 x120; fax: 978-368-0217
lindsay.nystrom@state.ma.us

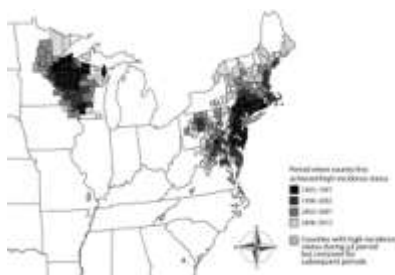
Commonwealth of Massachusetts Municipal Grant Finder

This one-stop-shop web portal provides local officials with a centralized place where they can learn about grant funding resources, regardless of which state agency manages the grant program.

To use the Municipal Grant Finder, a local official simply selects the appropriate category (such as Community Development or Education) and is presented with a list of available resources. The user can then see detailed information about the available funding and how to apply. Local officials no longer need to know which of the **Commonwealth's state agencies manage a specific grant program**. The municipal grant finder is available at mass.gov/municipalgrants.

Gleanings

Centers for Disease Control and Prevention Charts the Geographic Distribution and Expansion of Human Lyme Disease, United States



Lyme disease occurs in specific geographic regions of the United States. We present a method for defining high-risk counties based on observed versus expected number of reported human Lyme disease cases. Applying this method to successive periods shows substantial geographic expansion of counties at high risk for Lyme disease.

Lyme disease is a multisystem tickborne zoonosis caused by infection with the spirochete *Borrelia burgdorferi*. Since 1991, state and territorial health departments have reported human Lyme disease cases to the Centers for Disease Control and Prevention through the National Notifiable Diseases Surveillance System. Most cases are

reported from the northeastern, mid-Atlantic, and north-central states, although the number of jurisdictions that report a high number of cases has increased over time. To better quantify and track the geographic distribution of human Lyme disease, we developed a simple but robust method for defining counties where residents have a high risk of acquiring this disease. Read the full report at http://wwwnc.cdc.gov/eid/article/21/8/14-1878_article

Targets for Trees: Mapping Neighborhood Heat and Air Quality

Portland, OR (July 29, 2015) — In the middle of a July heat wave, Portland State University (PSU) researchers [Vivek Shandas](#) and Jackson Voekel drove across the city of Portland with a thermometer connected to a GPS unit sticking out the window. Together the two devices logged the temperature and location every second as the car moved along **city streets. It's tracking the temperature differences from one block to the next at the street level** – where people actually feel the heat.

PSU researchers have spent years developing heat maps of Portland's neighborhood temperatures based on numerous traverses across the city. In a heat wave, they've found a 15-degree difference between places like the airport and a forested park. Read the full story at [ACTrees.org](#).

Massachusetts Urban Tree Planting Program Grows

By Paul Tuthill

July 8, 2015—Massachusetts is expanding an initiative to reduce energy use in urban neighborhoods by planting trees. **In western Massachusetts, the city of Chicopee is now a beneficiary of the program. The “Greening the Gateway Cities Program” has a goal of increasing the urban tree canopy by 10 percent in selected neighborhoods in cities** where age and a history of manufacturing has contributed to a loss of trees through the years. At separate tree planting events in Revere and Chicopee, last month, Massachusetts Energy and Environmental Affairs Secretary Matthew Beaton said the state will spearhead tree planting efforts in the two cities. Listen to the full story at [WAMC.org](#).

Mapping the Forest for the Trees: A Census Grows in the Five Boroughs

New York City is home to more than 600,000 street trees, according to some estimates. But good luck finding any one of those trees on a map—that is, until now. For the first time ever, the NYC Department of Parks and Recreation is working with thousands of volunteers to measure and map every single street tree on every single block in every single neighborhood in all five boroughs of the city. Every. Single. Tree. Read the full story at [thenatureofcities.com](#)

Emerald Ash Borer Traps

Questions about Emerald Ash Borer Traps Answered

Read this FAQ sheet to find out more about detection efforts in the United States: http://www.aphis.usda.gov/publications/plant_health/2015/2015_eab_survey.pdf

Gleanings

Trees under attack: Worcester's beetle battle rages on

By Tom Quinn

July 30, 2015—August, according to those fighting the devastating Asian Longhorned Beetle (ALB) in Worcester, is **"Tree Check Month."** In a city that has been devastated by a species of beetle that tunnels deep into trees and kills them from within, the best thing property owners and city officials can do is check the thousands of trees that lend color to a concrete jungle. Read the full story at worcestermag.com.

Massachusetts Environmental Officials Launch First in the Nation Park & Pedal Commuting System

July 31, 2015—Boston— Today, at an event at Christian Herter Park, Energy and Environmental Affairs (EEA) Secretary Matthew Beaton, Department of Transportation Secretary and CEO Stephanie Pollack, Department of Conservation and Recreation (DCR) Deputy Commissioner for Operations Matthew Sisk, and David Montague from Montague Bikes unveiled the first in the nation multimodal commuting network, called Park&Pedal. The free program, which is designed to encourage bike commuting by providing a network of parking hubs conveniently located within cycling distance from centers of employment, will allow commuters to park their cars for free and then ride their bikes the remaining distance to work. Read the full story at mass.gov (PDF).

Washington, D.C. turns to tech to target illegal tree removal

August 4, 2015—Measuring the sizes of chopped-down trees from their stumps is what D.C.'s Urban Forestry Administration can now do, with updated technology from tech company Esri for spatially enriched street-level imagery. This is what Earl Eutsler, deputy associate director at the administration, said is making a big difference in tracking illegal tree removal since the technology was implemented in the past year. **"It's all about being able to measure what's no longer there,"** Eutsler said.

Read the full story on how D.C. uses LiDAR to enforce its tree ordinance and watch a video on how D.C. uses arcgis-pro to ensure environmental justice at bizjournals.com.



Outreach Idea—Tree Scavenger Hunt

From ReGreen Springfield

City Wide Tree Identification Scavenger Hunt Extended through August

July 31, 2015—During the month of July and August, ReGreen Springfield is conducting a Tree Identification Scavenger Hunt, which will provide an opportunity to win prizes. Trees in parks across the city have been flagged, with a **'tree tag' which provides information on the** logistics of the event. The idea is to have residents travel to various parks and try to identify the genus and/or species of the trees that are flagged.

The flagged trees are a variety of species, and the first person to find each flag and correctly identify 10 trees will win a new tree, to be planted by ReGreen Springfield at the location of your choice.

Learn more about this great outreach happening at: <http://regreenspringfield.com/news/city-scavenger-hunt/>

News

With Suspect in 'Tree Ninja' Case Behind Bars, City Replants in Brighton

July 23, 2015—For years the city refused to plant new trees along Winship Street in Brighton, fearing a man referred to by police as the “tree ninja” would hack the young saplings to death. The pattern of tree destruction had persisted for more than a decade. But with a suspect now behind bars, city workers recently replanted the foliage on neighborhood streets. **It's a welcome development for neighbors, who had long complained about the issue. “It's great news,” said Mark Buccelli, a Winship Street resident. “Hopefully, this time, they will stay there.”** Ryan Woods, a spokesman for the Parks and Recreation Department, said the city planted six trees last month in empty tree pits. It was with the encouragement of Boston police to beautify the street and resupply trees destroyed there, Woods said. **“They felt confident now that they would be safe.”** Read the full story at [The Boston Globe](#).

Attack on White Fringetree by Emerald Ash Borer Likely to be Widespread

By Jim Hannah
July 22, 2015—Biology professor Don Cipollini, director of Wright State University's Environmental Sciences Ph.D. Program, announced in October that the beetle had spread to white fringetree. The identities of adult and larval beetles collected from white fringetree were confirmed on the basis of morphology and DNA sequencing. Now, Cipollini suggests that use of white fringetree by emerald ash borer is likely to be widespread and that the beetle may move to close relatives too. Read the full story and watch an accompanying video at [phys.org](#).

Drought is Preventing Trees from Fighting Climate Change

By Elizabeth Pennisi
July 30, 2015—In terms of curbing climate change, trees are man's best friend. As they grow, they pull carbon dioxide out of the air and convert it into sugars that add bulk to their trunks. This carbon storage ability is so well-known it has spurred an international tree-planting movement to slow global warming. But drought could compromise the ability of trees to protect us from climate change, according to a new study. Scientists have shown that drought slows tree growth for many years beyond the initial dry spells, creating what researchers call a **“drought legacy.”** Read the full story at [Science](#).

Salvaging a Long-Lasting Wood, and New York City's Past

By Vivian Yee
July 21, 2015—The blue-collar shop floors fall silent, **find new life as artists' studios, then exchange their 19th-century guts for 21st-century wine cellars, marble bathrooms and private gyms:** So goes the story in a city where time does not stand still for long, and **where a neighborhood's shifting fortunes can be told through its old warehouses and factories.** In the process, the city coughs up timbers that were logged and hoisted into place when it was almost young. **New York is the country's largest repository of the lumber that formed the spine of the Industrial Revolution — a five-borough safe deposit box for New England white pine and spruce, Pacific Northwest Douglas fir and, especially, Southern longleaf pine.** Read the full story at [nytimes.com](#).

Urban Forestry Charge Will Soon Appear on Madison, WI, Services Bills

By Bryna Godar
June 30, 2015—Come August, Madison residents will see a new item on their monthly municipal services bill with the addition of an urban forestry charge. The city budgeted \$1 million in revenue from the newly created charge during its budgeting process at the end of 2014, but it did not have a policy for how to assess the charge at the time. It has taken six months to develop that policy, with **the city's finance committee approving the draft policy Monday evening. “What we kept coming back to was to try to keep it very simple,”** said city Parks Superintendent Eric Knepp. The city considered various methods, including assessing the charge by linear frontage or size of property, eventually settling on a monthly rate for five different classifications of properties. Residential properties will be assessed a \$2.76 monthly charge, multi-family will be \$3.97, storm water will be \$7.23, commercial/industrial will be \$7.47 and government will be \$20.61. Read the full story at [The Capital Times](#).

How Walking in Nature Changes the Brain

By Gretchen Reynolds
A walk in the park may soothe the mind and, in the process, change the workings of our brains in ways that improve our mental health, according to an interesting new study of the physical effects on the brain of visiting nature. Most of us today live in cities and spend far less time outside in green, natural spaces than people did several generations ago. City dwellers also have a higher risk for anxiety, depression and other mental illnesses than people living outside urban centers, studies show. Read the full story at [nytimes.com](#).

On the Horizon

- Sept 3 Urban Forestry Today webinar, www.joinwebinar.com Code: 136-194-563
- Sept 3 Emerald Ash Borer Workshop, Durham, CT, www.ctpa.org
- Sept 9 Urban Forest Connections webinar, <http://www.fs.fed.us/research/urban-webinars>
- Sept 10 Landscape Pests and Problems Walkabout, UMass Dartmouth, www.ag.umass.edu/landscape
- Sept 17 Massachusetts Soil Conference, www.worcesterconservation.org
- Sept 22 MAA Dinner Meeting, Framingham, www.massarbor.org
- Sept 23 Saluting Branches, Arborist Day of Service, www.salutingbranches.org
- Sept 23 Establishing Trees in Urban Environments, Newburyport, MA, www.masstreeewards.org
- Sept 26 UMass – Stockbridge Tree Climbing Competition
- Sept 27 Town Forest Celebration, Wilbraham, MA,
- Oct 1 **Deadline: Intent to Apply DCR Urban & Community Forestry Challenge Grant**
- Oct 1 Urban Forestry Today webinar, www.joinwebinar.com Code: 101-432-635
- Oct 2 MCA Exam, Elm Bank, Wellesley, www.massarbor.org
- Oct 2-3 2015 DCR Tree Steward Training, Harvard Forest, Petersham
- Oct 6 EPA Green Infrastructure Webcast, www.epa.gov
- Oct 6 Western Massachusetts Tree Wardens Dinner Meeting, Northampton, MA, www.masstreeewards.org
- Oct 9-11 **Women's Tree Climbing Workshop, Petersham, MA,** www.newenglandisa.org
- Oct 14 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Oct 20 MAA Safety Saves, Elm Bank, Wellesley, www.massarbor.org
- Oct 20 MAA Dinner Meeting, Framingham, www.massarbor.org
- Oct 25-27 New England ISA Annual Conference, North Conway, NH, www.newenglandisa.org
- Oct 28 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>
- Nov 1 **DCR Urban & Community Forestry Challenge Grants Due**
- Nov 5 Urban Forestry Today webinar, www.joinwebinar.com Code: 138-507-475
- Nov 12-14 TCI Expo, Pittsburgh, PA, www.tcia.org
- Nov 16-17 Society of Municipal Arborists Annual Conference, Denver, CO, www.urban-forestry.com
- Nov 18-19 Partners in Community Forestry Conference, Denver, CO, www.arborday.org
- Dec 2-4 New England Grows, Boston, MA, www.newenglandgrows.org
- Dec 2-5 American Society of Consulting Arborists Conference, Tucson, AZ, <https://www.asca-consultants.org/>
- Dec 8 EPA Green Infrastructure Webcast, www.epa.gov
- Dec 9 Urban Forest Connections Webinar, <http://www.fs.fed.us/research/urban-webinars/>

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Karyn E. Polito, Lieutenant Governor

Matthew A. Beaton, Secretary, Executive Office of Energy and Environmental Affairs

Carol I. Sanchez, Commissioner, Department of Conservation and Recreation

Peter Church, Director of Forest Stewardship, Department of Conservation and Recreation

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If you have a topic you'd like to see covered or want to submit an item to *The Citizen Forester* (article, photo, event listing, etc.), please contact [Mollie Freilicher](mailto:mollie.freilicher@state.ma.us) or click [here](#).

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